FIVE TYPHOONS IN THE FAR EAST IN JUNE, 1923.

By Rev. JOSÉ CORONAS, S. J.

[Weather Bureau, Manila, P. I.]

The month of June has been very stormy in the Far East. No less than five typhoons have been noticed in our weather maps, two of them having been particularly severe and destructive in Yap (Western Carolines) and the Philippines, respectively.

The Samar and Leyte typhoon, June 3.—This typhoon was clearly shown by our weather maps in the afternoon of June 2 about 100 miles to the east of the southernmost part of Samar. Proper and timely warnings were sent immediately to the threatened regions of Samar and the northern part of Leyte. The center reached Samar close to Borongan (125° 26′ long. E., 11° 37′ lat. N.) shortly after midnight of June 2 to 3, barometric minimum registered there being as low as 729.52 mm. (28.72 inches). The typhoon inclined northward after crossing the southern part of Samar, moving NW. between Samar and Masbate. Once in southeastern Luzon, it traversed the Province of Camarines in a northerly direction, thus entering again the Pacific on the morning of June 4. In the Pacific it recurved further northeastward to the east of northern Luzon. We could not follow the typhoon after the 6th, and it is supposed that it filled up not far from 130° longitude E., and 20° latitude N. Very great damage was done to the Provinces of Samar and Leyte, but not so much to Masbate, Albay, and Camarines Provinces, as the typhoon seems to have decreased in intensity after crossing Samar. The town of Borongan in the eastern coast of Samar has been reported as practically swept by the winds, the sea waves, and the rain water rushing from the mountains.

The position of the center on the 2d to 6th was as follows:

June 2, 2 p. m., 127° 00′ long. E., 10° 55′ lat. N.
June 3, 6 a. m., 125° 00′ long. E., 11° 35′ lat. N.
June 3, 2 p. m., 124° 05′ long. E., 12° 05′ lat. N.
June 4, 6 a. m., 122° 50′ long. E., 13° 45′ lat. N.
June 5, 6 a. m., 124° 00′ long. E., 17° 30′ lat. N.
June 6, 6 a. m., 127° 15′ long. E., 19° 55′ lat. N.

The Yap typhoon, June 2, 1923.—At 2 p. m. of June 2, while our weather map showed a typhoon to the east of Samar, another one was shown to the SSE. of Yap, Western Carolines, in about 139° long. E., 8° lat. N. As it moved NNW. it passed practically over our station of Yap nearly before midnight of June 2, only two hours before the preceding typhoon reached the eastern coast of Samar, as stated above. The barometric minimum recorded at Yap was 737.82 mm. (29.05 inches) at 11:35 p. m., and the wind shifted from NW. to S., blowing with hurricane force for about five hours, and causing considerable damage to the Island. There were about two hours of relative calm from 10 p. m. to 12 midnight.

The typhoon was probably situated at 6 a. m. of the 3d and 4th at 122° 25′ long. E., 10° 40′ lat. N., and 124° 30′ long. E., 14° 30′ lat. N., respectively. Our weather maps did not show this typhoon any more after the 4th.

Two typhoons east of the Philippines, June 12 to 22.—The first of these typhoons appeared on the 12th to the SSE. of Guam between 145° and 149° longitude E., and in about 6° latitude N. It moved first westward, passing to the S. of Yap in the evening or night of the 13th; then it recurved N. and NE. on the 14th and 15th. The observations from Guam and Yap situated the center on the 16th in about 136° long. E., and 16° lat. N. It was impossible to follow it after the 16th.

The other typhoon was shown by our weather maps about 200 miles to the east of Samar, in the afternoon of the 16th. It moved NNW. on the 16th, N. on the 17th, NW. on the 18th, and N. again on the 19th and part of the 20th, when it passed close to the Meiacoshima group of Islands to the east of northern Formosa. On the 20th it inclined westward and reached the China coast between Shanghai and Formosa.

Typhoon in northern Luzon, June 29.—This typhoon appeared clearly on the 27th over 300 miles to the east of southern Luzon. It moved in a west-northwesterly direction and traversed the northern part of Luzon on June 29. Although the center passed over 100 miles to the north of Manila, strong winds and squalls caused some damage in the City. Considerable damage was done to the roads of Luzon north of Manila. The force of the winds near the center, however, was not much greater than in Manila. The typhoon inclined northward to the south of Hongkong and entered China a few miles to the west of Macao, where considerable damage was done according to cablegrams received in Manila on July 4.

DETAILS OF THE WEATHER IN THE UNITED STATES.

GENERAL CONDITIONS.

ALFRED J. HENRY.

The current weather was exceptional in at least two respects, first, the rather long-continued spell of warm weather in the Middle Atlantic States, and thence northwest to the Lake region and Canada (see Chart III), and second, the heavy rains in the Arkansas River Valley in southern Kansas (see p. 329 of this REVIEW). In connection with the high temperatures in northeastern districts pilot-balloon observations during the continuance of the high temperatures seem to show an anticyclonic circulation at and above the 1-kilometer level; that is southerly winds over the Plains States, shifting to southwest over the Lake region and becoming northwest over the Middle Atlantic States. See also "Free Air Summary" p. 323 this REVIEW.

The usual details follow.

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CYCLONES AND ANTICYCLONES.

By W. P. DAY.

Thirteen low-pressure areas were charted during June, the majority of which took shape over the Plateau and Rocky Mountain regions, where the air pressure is normally low at this season of the year. This persistent low pressure, especially in the far Southwest, in conjunction with the northward movement of the high-pressure belt over the ocean, is coincident with the cessation of the so-called South Pacific HIGHS, that is, high-pressure areas moving in from the Pacific in latitudes south of about 42°. In fact, this type is rarely noted between April and October, probably never in summer. It is also interesting to note that during practically the same period, few if any cyclonic storms pass inland from the Pacific south of latitude 50° with the possible exception of tropical disturbances on the coast of Lower